

## EXPLANATION OF THE PLATES.

## PLATE XXXI.

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| <p>Fig. 1. <i>Rhagigaster corrugatus</i>, sp. n. ♂.<br/>         2. <i>Rhagigaster corrugatus</i>, sp. n. ♀.<br/>         3. <i>Eirone ferrugineicornis</i>, sp. n. ♂.<br/>         4. <i>Gymnothynnus</i> (?) <i>trianguliceps</i>, sp. n. ♀.<br/>         5. <i>Hemithynnus petulans</i> Sm. ♂.<br/>         6. <i>Hemithynnus petulans</i> Sm. ♀.<br/>         7. <i>Oncorrhinus xanthospilus</i> Shuck. ♀.<br/>         8. <i>Æolothynnus crenulatus</i>, sp. n. ♂.</p> | <p>Fig. 9. <i>Pogonothynnus vestitus</i> Sm. ♂.<br/>         10. <i>Pogonothynnus vestitus</i> Sm. ♀.<br/>         11. <i>Zaspilothynnus radialis</i>, sp. n. ♂.<br/>         12. <i>Zaspilothynnus gilesi</i>, sp. n. ♂.<br/>         13. <i>Zaspilothynnus gilesi</i>, sp. n. ♀.<br/>         14. <i>Zaspilothynnus clelandi</i>, sp. n. ♂.<br/>         15. <i>Zaspilothynnus clelandi</i>, sp. n. ♀.</p> |
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## PLATE XXXII.

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| <p>Fig. 1. <i>Ephutomorpha gilesi</i>, sp. n. ♂.<br/>         2. <i>Ephutomorpha gilesi</i>, sp. n. ♀.<br/>         3. <i>Ephutomorpha perelegans</i>, sp. n. ♀.<br/>         4. <i>Anthobosca gilesi</i>, sp. n. ♂.<br/>         5. <i>Pseudogenia fasciata</i> Fabr. ♀.<br/>         6. <i>Cryptocheilus darwinii</i>, sp. n. ♀.<br/>         7. <i>Anoplius atavus</i>, sp. n. ♀.<br/>         8. <i>Anoplius senex</i>, sp. n. ♀.</p> | <p>Fig. 9. <i>Planiceps aureovestitus</i>, sp. n. ♀.<br/>         10. <i>Ceropales tenuatus</i>, sp. n. ♀.<br/>         11. <i>Paracrobroggatti</i> Turn. ♀.<br/>         12. <i>Ammophila</i> (<i>Parapsammophila</i>) <i>eremophila</i>, sp. n. ♂.<br/>         13. <i>Cerceris gilesi</i>, sp. n. ♂.<br/>         14. <i>Bembex aureofasciata</i>, sp. n. ♂.<br/>         15. <i>Auchenephorus coruscaus</i> Turn. ♀.</p> |
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2. Descriptions of new LYCÆNIDÆ and HESPERIIDÆ from Tropical West Africa. By HAMILTON H. DRUCE, F.L.S., F.Z.S., &c.

[Received December 13, 1909.]

(Plates XXXIII.-XXXV.\* and Text-fig. 36.)

The following descriptions are of new forms of butterflies contained in the rich collections recently made by Mr. G. L. Bates in the Cameroons and by Mr. P. Landbeck in the upper Kasai district of the Congo.

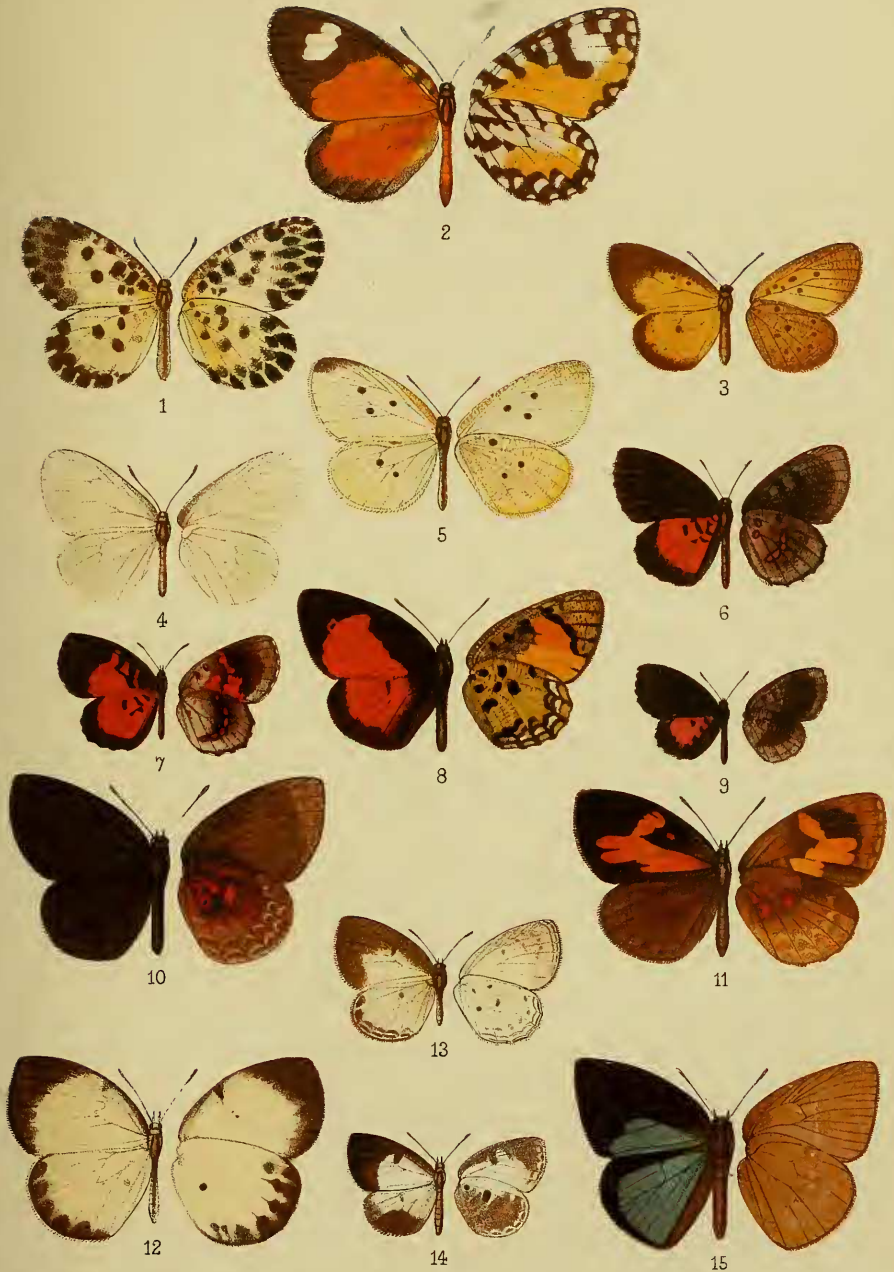
## LYCÆNIDÆ.

TELIPNA TRANSVERSTIGNA, sp. n. (Plate XXXIII. fig. 2, ♀.)

*Female*. Upper side: both wings dark orange-red with black apices and margins. Fore wing with a large pure white subapical patch. Under side pale brownish yellow, with the usual black markings and white spots, and in addition to these on the hind wing, arising from the base and from the anal margin near the base, are two prominent black bars running almost at right angles to the black costal bars.

Expanse  $2\frac{1}{10}$  inches.

\* For explanation of the Plates see p. 378.

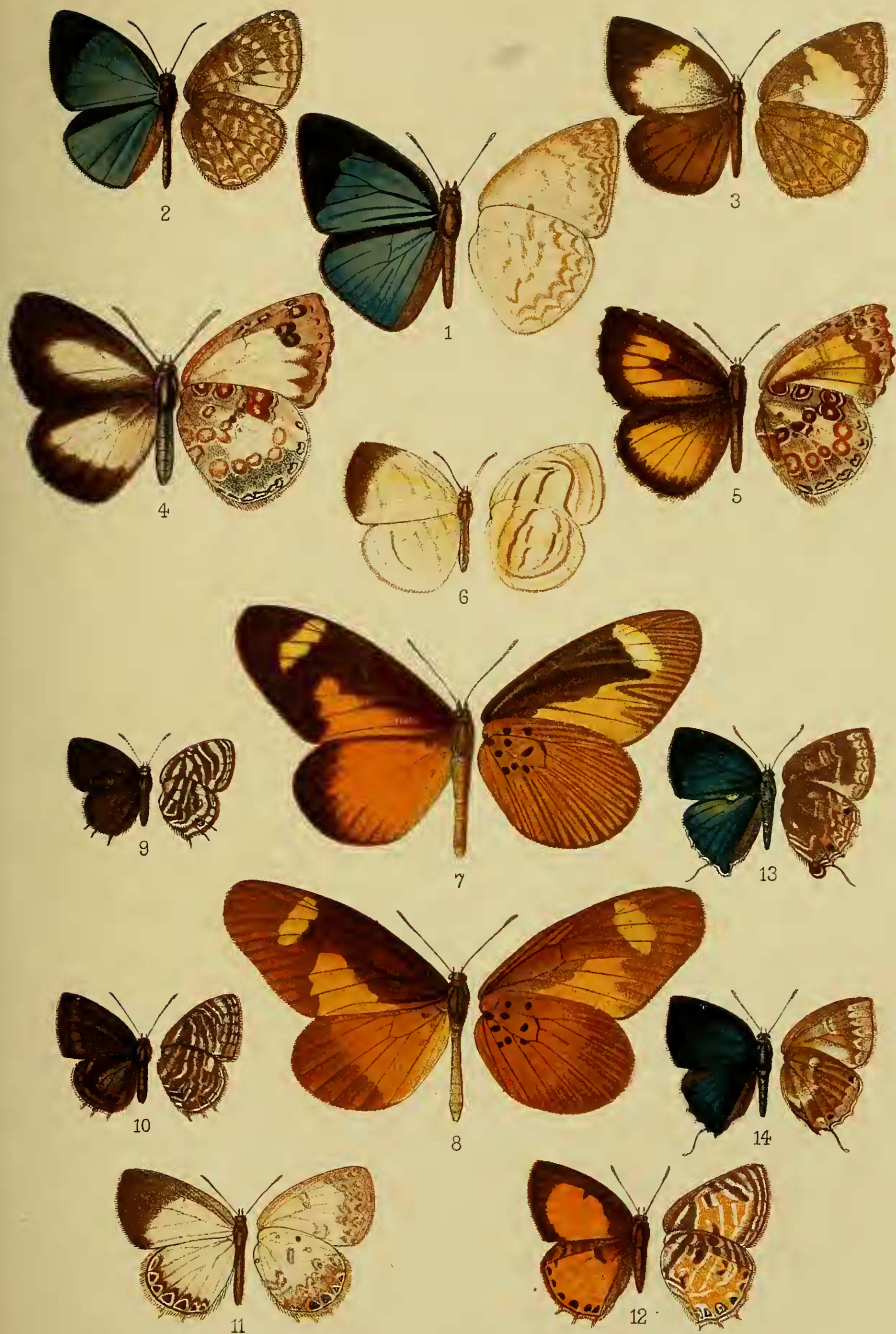


Horace Knight del et lith.

West, Newman chr.

TROPICAL W. AFRICAN LYCÆNIDÆ.



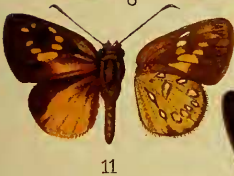
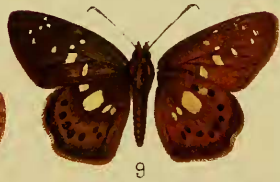
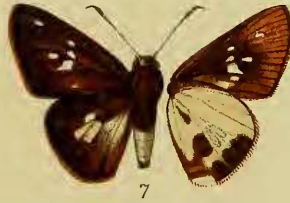
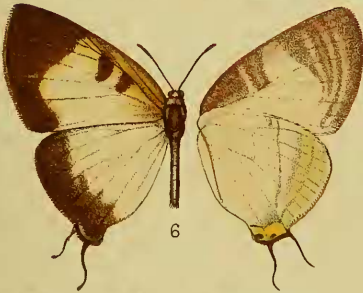
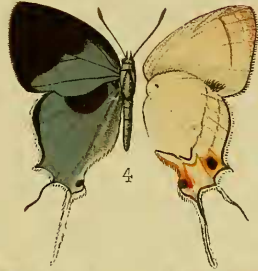
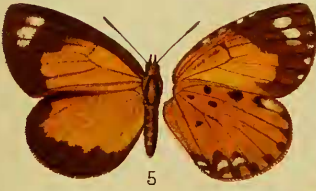
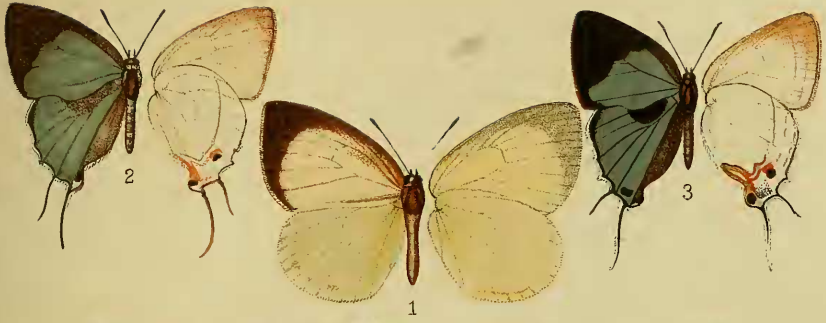


Horace Knight del et lith.

West, Newman chr.

TROPICAL W. AFRICAN LYCÆNIDÆ.





Horace Knight del et lith.

West, Newman chr.



*Hab.* Bitje, Ja river, Cameroons, 2000 ft., wet season (*G. L. Bates*).

Type, Mus. Druce.

The markings on the under side of the hind wing give this insect a very different appearance from any other described in the genus.

PENTILA PARDALENA, sp. n. (Plate XXXIII. fig. 1, ♂.)

*Male.* Upper side: both wings pale yellow, darker towards the base, heavily spotted with black over the cellular and discal areas; apex and outer margins broadly black, containing rows of pale yellow spots. Under side clear pale yellow, darker on the hind wing and towards base of fore wing. Discal and cellular black spots as above, except on the hind wing where there are several additional black basal spots. The apex and outer margin have a marginal and a submarginal row of large elongated black spots running alternately.

Expanse  $1\frac{7}{10}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*).

Type, Mus. Druce.

This is a more heavily spotted form than *Pentila christina* Suffert\* (a photograph of the type of which I have before me) and the ground-colour below is clear, not speckled as in that insect.

PENTILA INCONSPICUA, sp. n. (Plate XXXIII. fig. 3, ♀.)

*Female.* Upper side: allied to *Pentila petrea* Hew., paler and without the reddish tinge. In the fore wing the dark apical border is much broader, and there is an additional black spot on the disc situated near the base of cell 2. On the hind wing there is trace of a submarginal row of small black spots situated between the veins, which in some specimens is clearly indicated. Under side: differs from that of *P. petrea* by the addition of the black spot in cell 2, by the absence of the two black spots at the angle in the fore wing, and by the submarginal row of spots on the hind wing being placed further in from the margin.

Expanse  $1\frac{3}{10}$  inch.

*Hab.* Upper Kasai district, Congo Free State, Uganda.

Type, Mus. Druce.

This insect is even paler than *P. preussi* Staud., a large series of which we have received from the same locality.

The British Museum collection contains six specimens from Entebbe, Uganda.

PENTILA PARADOXA, sp. n. (Plate XXXIII. fig. 4, ♂.)

*Male.* Upper and under sides: both wings semitransparent, creamy white, without markings. Basal third of costal margin of fore wing on both surfaces grey. When held at an angle the whole of the upper and under surfaces is suffused with a greenish

\* *Pentila christina* Suffert, 'Iris,' xvii. p. 45 (1904).



opalescence which is most pronounced over the discal areas. Abdomen black above, pale brown below; legs pale brown, transparent. Antennæ black.

Expanse  $1\frac{1}{2}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*).

Type, Mus. Druce.

Described from two specimens which are identical. It is allied to *P. tirza* Hew.\* which has a black costal margin and apex.

The wings of this insect are so transparent that it is possible to read the printed locality label through them.

*PENTILA BITJE*, sp. n. (Plate XXXIII. fig. 5, ♂.)

*Male.* Upper side: both wings uniform pale cream; semi-transparent. Fore wing with the apex narrowly fuscous, and the costal margin dusted with fuscous scales; three clearly defined circular black spots on the disc, placed as follows: one in the centre of the cell, one at the end of the cell, and one in cell 2 rather before its middle. Hind wing also with three black spots, placed, one on the costal margin before the middle, above the cell, one at the end of the cell, and one in cell 2 near its base. Cilia concolorous with wings. Under side as above excepting that the fore wing is without the dark apex and that the whole area of both wings is slightly dusted with fuscous scales. Abdomen fuscous above, pale below. Palpi and legs ochreous.

*Female.* Marked exactly as the male.

Expanse  $1\frac{1}{2}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry and wet seasons (*G. L. Bates*).

Types, Mus. Druce.

Described from seven specimens. The black spot in cell 2 of the hind wing is very minute in several examples, and in two is entirely wanting, but on one wing only.

There is also a specimen in the British Museum from the Cameroons.

*MINACRÆA LANDBECKI*, sp. n. (Plate XXXIV. figs. 7 ♂, 8 ♀.)

*Male.* Upper side: fore wing dull blackish brown, with the inner marginal area brownish ochreous, shading paler and decreasing in width to vein 4. A pale yellow, slightly ochreous edged, subapical band placed rather more than half-way between the end of the cell and the apex and crossed by the brown nervules. Hind wing brownish ochreous, gradually merging into a brownish black apical and outer marginal area; inner margin, excepting extreme edge which is pale yellow, fuscous. Under side: fore wing—costal area to subapical band black,

\* *Pentila tirza* Hew., Ent. Mo. Mag. x. p. 125 (1873).

inner marginal area broadly ochreous; apical area with the veins and interspaces dusted with rows of ochreous scales. Hind wing: ground-colour blackish brown, thickly dusted with reddish ochreous scales over the cellular and basal areas, and arising from the cell are a number of narrow ochreous lines composed of dusted scales, which before they reach the margin become divided into two. The basal area supports ten deep black spots, most of which are distinctly ringed with ochreous; one is placed at the extreme base, two are above the cell, two in the cell, another partly closing the cell, and four below. Palpi black. Head black, with the eyes white-ringed. Abdomen ochreous fuscous, with a black spot on each segment below. Legs black with white spots. Antennæ black.

*Female.* Differs from the male in that the subapical band on the fore wing is the same shade of reddish ochreous as the inner marginal area and the hind wing. On the fore wing the ochreous area is more compact, and does not extend so near to the base, and on the hind wing the dark apical area is much broader and the conspicuous dusting of the male is absent, whilst the veins for some distance into the dark area are ochreous, those in the male being fuscous well into the ochreous area. On the under side it differs only from that of the male by the less extensive ochreous area and the concolorous subapical band on the fore wing.

Expanse, male  $2\frac{3}{5}$  inches, female  $2\frac{7}{10}$  inches.

*Hab.* Upper Kasai district, Congo Free State (*P. Landbeck*).

Types, Mus. Druce.

I thought this might be *M. darwinia* Butl.,\* the figure of which appears to be a female, but it is entirely without the yellow fascia on the hind wing below described by Dr. Butler. The type of *M. darwinia* is now in the Tring Museum.

Although obviously Acraeine in appearance I am unable to find any species in that group which it is exactly like.

*PSEUDERESIA MINIMUM*, sp. n. (Plate XXXIII. figs. 6 ♂, 7 ♀.)

*Male.* Upper side: fore wing uniform dark blackish brown, without markings. Hind wing bright orange-red with the apex and outer margin broadly and evenly dark brown; the inner margin is narrowly and evenly dark brown. The basal area has several elongate dark brown markings, some of which are confluent. Cilia whitish, brown at the termination of the nervules. Under side: both wings silvery brown, with the central areas shading to dark brown. Fore wing with a brown mark in the middle of the cell and another, larger, at the end. Hind wing with several small red spots near the base, and a curved discal band of five bright red spots, commencing on the costa and reaching almost to the inner margin. Thorax and abdomen black above, paler below. Legs black, with white spots.

\* *Mimacraea darwinia* Butl. Lep. Ex. p. 104, pl. 38. fig. 8 (1872). Sex not stated.

Palpi fuscous, with black tips. Antennæ black with white spots.

*Female.* Upper side: differs from the male by the inner marginal area being heavily marked with orange-red, up to and beyond the end of the cell, to which are joined two orange patches, one in the cell, the other just beyond. On the under side, the orange-red patch is divided by a large brown spot: otherwise as above. Hind wing as in male.

Expanse, male  $1\frac{3}{10}$  inch, female  $1\frac{1}{10}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*).

Types, Mus. Druce.

Allied to *Pseuderesia isca* Hew.,\* but differently marked.

*PSEUDERESIA RUTILO*, sp. n. (Plate XXXIII. fig. 9, ♂)

*Male.* Allied to the preceding *P. minium*, but much smaller. Upper side differs from that species by the inner margin of hind wing being broadly bordered with dark brown blotches from the base to the anal angle. The under side differs from that of *P. minium* by the brown shading over the central areas being more extensive and by the possession of one red spot on the discal area of the hind wing, placed at the end of the cell. There are also several minute red dots near the base and one in cell 1.

Expanse 1 inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., wet season (*G. L. Bates*).

Type, Mus. Druce.

This may prove to be a variety of *P. minium*, but the under side of the hind wing is so differently marked that for the present I prefer to consider it distinct. It is also a much smaller insect.

*PSEUDERESIA RUSSULUS*, sp. n. (Plate XXXIII. fig. 8, ♂)

*Male.* Upper side: fore wing clear orange-red; the basal and apical areas broadly dark brown, tapering to a point at the angle. Cell wholly dark brown. Hind wing clear orange-red, a black streak partially closing the cell; basal, inner and outer marginal borders rather broadly dark brown. Cilia of fore wing brown, of hind wing whitish between the nervules. Under side: fore wing—costa, apex and outer margin dull brownish yellow, dusted with dark brown scales, thickest on the veins; basal area black, with several deeper spots in the cell; discal area orange-red, becoming paler towards the inner margin; a subapical black band reaching across the wing. Hind wing brownish yellow, dusted with brown along the costa; basal area with eight distinct black spots of varying sizes; an irregular submarginal black band enclosing a row of whitish triangular lunules, and a marginal row of yellow lunules. Thorax and abdomen brown above,

\* *Liptena isca* Hew., Exot. Butt. v. *Pent. & Lipt.* pl. 2. figs. 14-16 (1873).

yellowish below. Legs black with white spots. Palpi black, with white hairs.

Expanse  $1\frac{7}{10}$  inch.

*Hab.* Upper Kasai district, Congo Free State (*P. Landbeck*).

Type, Mus. Druce.

Not very nearly allied to any other species of the genus.

LARINOPODA SPUMA, sp. n. (Plate XXXIII. fig. 12, ♂.)

*Male.* Upper side: fore wing cream-colour, darker than *L. lircea* Hew.\*, with the costa very narrowly and the apex and outer margins rather broadly and unevenly blackish brown; a slight indication of a blackish-brown tooth on the costa opposite the end of the cell. Hind wing cream, with the black spots of the under side showing through; outer margin rather broadly blackish brown, inwardly dentate. Cilia of both wings creamy. Under side cream-colour; fore wing with the apex and outer margin blackish brown as on upper side, the costa, from the base to the clearly defined black tooth on the costa, dusted with blackish brown. Hind wing with outer margin brown as on upper side, inwardly bordered with a submarginal row of darker brown large spots. A small black spot near the centre of cell 1. Thorax fuscous above. Abdomen cream above and below. Legs yellow dusted with black scales. Palpi yellow tipped with black.

*Female.* Differs from the male by the dark margins of both wings being narrower and paler on both surfaces.

Expanse, male  $1\frac{7}{10}$ , female  $1\frac{4}{5}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry and wet seasons (*G. L. Bates*).

Types, Mus. Druce.

Described from eight specimens. Amongst the wet season examples is a female in which the dark outer margin of the hind wing on both surfaces is reduced to an anteciliary line, and on the under side the submarginal row of spots is almost obsolete as also is the dark apex to the fore wing. May prove to be a form of *L. lircea*.

LARINOPODA EMILIA Suffert.

*Larinopoda emilia* Suffert, 'Iris,' xvii. p. 48 (1904); H. H. Druce, Ill. Afr. Lyc. pl. i. figs. 1, 1 a (1910).

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., wet and dry seasons (*G. L. Bates*); Upper Kasai district, Congo Free State (*P. Landbeck*).

We have a series of eighteen specimens from the above localities which agree exactly with an excellent photograph of the type of *L. emilia* in the Berlin Museum.

Possibly this is the same as *L. hermansii* Auriv. †, which I know only from the description, and if so, the latter name has priority.

Ab. *punctata*, ♀. Differs from the typical form on the under

\* *Liptena lircea* Hew., Exot. Butt. iii. *Pent. & Lipt.* pl. 2. figs. 10, 11 (1866).

† *Larinopoda hermansii* Auriv. Öfvers. Vet.-Akad. Förh. liii. p. 435 (1896).

side by the apex of the fore wing being but slightly laved with brown, and by the possession on the hind wing of an ultramedian row of black spots varying in intensity and placed between the veins, continuing on from the usual spot on the costa near the apex to the inner margin.

It is very difficult to arrive at a correct conclusion with regard to the insects of this genus. Professor Poulton has recently received a series from Lagos which contains examples of the broad bordered form (*L. aspidos mihi*), the typical *L. lagyra* Hew., and the form with the submarginal row of spots on the hind wing below, named by me *L. brenda*, from Benin. This latter I am now inclined to consider an aberration. It seems quite possible that there is only one white variable species of *Larinoptoda*, as the black cell-spot on the under side of the hind wing of *L. eureka* Plötz is sometimes nearly obsolete, and this spot constitutes its only distinction, specimens from Sierra Leone and from Addah having a broad dark border to the hind wing almost as in *L. aspidos*. It will be interesting to know the result of an examination of the ancillary appendages.

*LIPTENA PEROBSCURA*, sp. n. (Plate XXXIII. fig. 13, ♀.)

*Female*. Upper side: fore wing pale creamy white, costa, upper half of cell, apex, and outer margin broadly blackish brown; a small brown spot at the end of the cell. Hind wing pale creamy white; outer margin pale brown divided by the white nervules. The black spot of the under side at the end of the cell showing through the wing. Under side pale creamy white, both wings dusted with fine brown scales, densest towards costal and apical margins of fore wing. Outer margins of both wings with faint submarginal brown lines. Hind wing with an inner line composed of faint brown lunules; a small brown spot near the apex and three near the base. Apical area of fore wing with two semicircular faint brown lines much broken. Cilia of fore wing brown, of hind wing white. Palpi pale yellow. Legs orange.

Expanse  $1\frac{1}{5}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*).

Type, Mus. Druce.

Near to *L. alluaudi* Mabille\*, but differently marked.

*LIPTENA NUBIFERA*, sp. n. (Plate XXXIII. fig. 14, ♂.)

*Male*. Upper side: fore wing pure white with the apex and outer margin broadly blackish brown; costal margin narrowly and evenly blackish brown. A dark brown spot at the end of the cell joining the costal border. Hind wing: apex and outer marginal area broadly pale brown; a minute brown spot at the end of the cell. Cilia of both wings brown. Under side: both wings much as above, except that there is a clearly defined

\* *L. alluaudi* Mabille, Ann. Soc. Ent. France (6) x. p. 23, pl. 2. fig. 2 (1890).

submarginal line common to both wings, on the outer margin, composed of white crescent-shaped lunules. On the hind wing there is a dark brown spot near the base, and another, larger, at the end of the cell, and the whole wing is laved with brown, excepting the costal margin which is broadly white. Thorax and abdomen brown above, white beneath. Legs and palpi brown.

*Female.* Differs from the male only by being rather paler.

Expanse 1 inch.

*Hab.* Bitje, Ja River, Cameroons, 2000 ft., dry season (*G. L. Bates*).

Types, Mus. Druce.

Not closely allied to any with which I am acquainted.

LIPTENA SUBVARIEGATA ALIQUANTUM, subsp. n. (Plate XXXV. fig. 5, ♀.)

*Liptena subvariegata* Smith & Kirby, Rhop. Exot. i. Lyc. Afr. pl. xi. figs. 3, 4 (1890), ♂.

*Male.* Differs from the typical form on the under side only. There are on the disk of the hind wing, three clearly defined black spots which are wanting in Cameroon specimens; one, small, near the base in the cell, another, larger, near the end of the cell, and the third, small, resting on vein 1 near its centre.

*Hab.* Upper Kasai district, Congo Free State (*P. Landbeck*).

Type, Mus. Druce.

The *female*, which is a very different looking insect from the male, is dull reddish brown on both wings, with dark brown borders, and the fore wing has a subapical white band divided into three by the brown veins. On the under side the fore wing is as on upper side, with the addition of white spots on the costal and outer margins, whilst the hind wing is marked as in the male described above.

Received along with two males from Upper Kasai district, Congo Free State.

LIPTENA DEMON, sp. n. (Plate XXXVIII. figs. 10 ♂, 11 ♀.)

*Male.* Upper side uniform dark brown, without markings; fore wing slightly tinged with purple. Cilia fuscous. Under side dark brown; apex of fore wing and outer marginal half of hind wing paler and with some faint grey shadings. Hind wing with four orange spots, two in the cell and two in cell 1 near the base, these latter two centred by black dots. Head, thorax, abdomen, and palpi dark brown. Legs dark brown with pale spots. Antennæ black with white rings.

*Female.* Upper side: fore wing dark brown, discal area from the base bright orange adjoining a large orange patch beyond end of the cell. An orange spot in the centre of the cell. Hind wing uniform dark brown, paler than in fore wing, with a few orange scales dusted over the end of the cell. Under side: fore

wing coloured as above but paler and without the orange spot in the cell; outer margin with a row of pale triangular shades, most prominent towards the apex. Hind wing as in male.

Expanse, male and female,  $1\frac{4}{5}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*); Upper Kasai district, Congo Free State (*P. Landbeck*).

Types, Mus. Druce.

Described from seven males and one female.

From the description this insect seems to be allied to *L. ? o-rubrum* Holland\*, described by its author as a female. The female of *L. daemon* is strikingly different on the fore wing.

*MICROPENTILA CINGULUM*, sp. n.

*Female.* Closely allied to *M. alberta* Staud. †, from which it does not differ on the upper side, but on the under side the hind wing carries a submarginal row of crescent-shaped lunules in place of a fine line.

Expanse  $\frac{9}{10}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*).

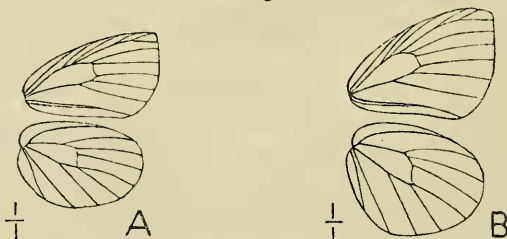
Type, Mus. Druce.

*NEAVEIA*, gen. n.

Differs from *Deloneura* Trimen by the longer cell in both fore and hind wings and by vein 5 in the fore wing arising from near the middle of the end of the cell, consequently the middle disco-cellular nervule is present. Vein 1 bears a well-marked brand much as described in *Deloneura millari* Trimen. The fore tarsi are undeveloped, not jointed and without claws, and are spinulose beneath.

Type, *N. lamborni*, sp. n.

Text-fig. 36.



The accompanying woodcuts show the venation of *Poultonia ochrascens* Neave, kindly lent to me by Professor Poulton (text-fig. 36 A), and of *Neaveia* (text-fig. 36 B).

Mr. Trimen has shown (T. E. S. 1906) that *Poultonia* sinks to *Deloneura*.

\* *Pseuderesia o-rubrum* Holland, 'Psyche,' v. p. 425 (1890).

† *Teriomina alberta* Staud. 'Iris,' iv. p. 220 (1891).

## NEAVEIA LAMBORNI, sp. n. (Plate XXXV. fig. 1, ♂.)

*Male.* Upper side: both wings uniform creamy white with a faint greenish tinge, slightly opalescent at the base of the hind wing. The basal half of the costal margin of the fore wing is pale brown, merging into the blackish-brown apical and outer margins. Under side pale opalescent greenish white without markings, but slightly yellowish over the discal area of fore wing. Cilia of both wings on both surfaces fuscous except towards the apex of the hind wing, where it is white. Thorax clothed with white hairs; abdomen yellowish white above and below. Antennæ black with minute white spots. Palpi deep black, shining, second joint inwardly clothed with pale brown hairs. Legs black with pale brown patches.

Expanse  $1\frac{7}{8}$  inch.

*Hab.* Oni, 70 m. east of Lagos, W. Africa (*W. A. Lamborn*)\*.

Type, Hope Coll., Oxford University Museum.

The specimen described above has a number of small black spots irregularly placed over the dark apical area of the upper side of the fore wing, but as those on the right wing are not placed in the same position as those on the left wing, I am inclined to believe that they are due to some external cause. The outer margin of the hind wing has, on both surfaces, a few brown scales which seem to point to the fact that it has lost, or is acquiring, a dark marginal border. The insect's Pierine appearance is very marked, and Mr. Lamborn is to be congratulated on a very interesting capture.

## EPITOLA BATESI, sp. n. (Plate XXXIV. figs. 2 ♂, 3 ♀.)

*Male.* Upper side: fore wing uniform rich blue with the apical third evenly deep black. Cilia black, white at the angle. Hind wing uniform rich shining blue, costal margin evenly and broadly dull black; inner margin dark grey. A black anteciliary line, slightly thickened at the extremity of the nervules. Cilia white. Under side silvery ashen grey with pale bluish-grey markings. Both wings with a marginal and a submarginal row of crescent-shaped lunules. Fore wing with a central circular band of markings commencing on the costa where they are small, and continuing to the anal angle where they become large patches. Hind wing: discal area covered by a number of small irregular markings. Thorax and abdomen black above, pale below. Antennæ black above, white-spotted below. Palpi cream, terminal joint black. Legs black with cream spots.

*Female.* Upper side: fore wing white with the apex and outer margin rather broadly blackish brown; basal area including upper part of cell and costal margin dark grey, more or less suffused with pale blue scales. Inner margin very narrowly grey

\* In a letter recently received from Mr. Lamborn he states that he captured this insect in the wet season, at dusk, on the veranda of his house.



dusted with pale blue scales. Hind wing uniform dark grey. Cilia paler. Under side as in male, excepting that the white area of the fore wing is reproduced as on upper side.

Expanse  $1\frac{3}{5}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*).

Types, Mus. Druce.

Near to *Epitola dorothea* Beth.-Baker\*, but vein 1 of the fore wing is not heavily thickened and the shape of the wings is different, the outer margin of the fore wing being decidedly concave and the hind wing not angled.

Described from five specimens.

*EPITOLA TUMENTIA*, sp. n. (Plate XXXIII. fig. 15, ♂.)

*Male.* Upper side: fore wing dark smoky brown; inner marginal area from base to vein 3 shining blue, not reaching beyond the wall of the cell. The base of vein 2 is much swollen almost to the origin of vein 3. Hind wing suffused with shining blue scales on a smoky ground; costal margin rather broadly, and outer and inner margins narrowly smoky brown. Under side: both wings uniform pale nut-brown with a common central fascia composed of very indistinct greyish spots, beyond which are dusted some greyish scales. Palpi brown, tipped with black. Legs brown with cream spots. Abdomen bluish grey above, brown beneath. Antennæ black above, white-spotted below.

Expanse  $1\frac{4}{5}$  inch.

*Hab.* Afikpo, N. Nigeria (*Reddick*).

Type, Mus. Druce.

Remarkable for the swollen vein on the fore wing, which is more prominent than in any other species of the genus, excepting perhaps *E. cercene* Hew.†, to which, as also to *E. carcina* Hew.‡, it is allied.

*EPITOLA NITIDE*, sp. n. (Plate XXXIV. fig. 1, ♂.)

*Male.* Upper side: fore wing rich shining blue with the costa, apex, and outer margin rather broadly deep black, very narrowly so towards the anal angle. Vein 1 is evenly thickened and covered with deep black scales from its base for rather more than half its length, vein 2 is also thickened and black from its base to the origin of vein 3. Hind wing rich shining blue with the costal margin broadly and evenly black, the inner margin dark grey and the outer margin very narrowly black. Cilia white. Under side white; both wings with an anteciliary line and two submarginal rows of crescent-shaped lunules, pale brown. Fore wing with a pale brown marking closing the cell, beyond which is

\* *Epitola dorothea* Beth.-Baker, Ann. Mag. Nat. Hist. ser. 7, vol. xiv. p. 227 (1904).

† *Epitola cercene* Hew. Ent. Mo. Mag. x. p. 150 (1873).

‡ *Epitola carcina* Hew. l. c. (1873).

a crescent-shaped short band composed of pale brown linear markings. The discal area of the hind wing is marked by a number of pale brown striæ irregularly placed. The apical area of the fore wing is slightly clouded. Thorax black above, white below. Abdomen black above, dark grey below. Legs white, dusted and spotted with black. Palpi white, terminal joint, which is long and slender, black. Antennæ black above, white-spotted below.

Expanse  $1\frac{9}{10}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*).

Type, Mus. Druce.

This is a fine insect which has a very straight outer margin and an acute apex to the fore wing. On the under side it is marked much like *E. goodii* Holland\*, which seems to be the same as *E. gerina* Hewitson†, whose figure is a very poor one. *E. nitide* is a much larger insect with different shaped wings.

#### POWELLANA.

*Powellana* Beth.-Baker, P. Z. S. 1908, p. 114.

#### POWELLANA COTTONI.

*Powellana cottoni* Beth.-Baker, P. Z. S. 1908, p. 114, pl. ix. fig. 13, ♂.

*Female.* Upper side: pale brown with a broad white central band common to both wings. Fore wing with a white costal marking above the end of the cell. The basal area of the fore wing and the whole of the hind wing, except the apex and outer margin, are dusted with pale violet-blue scales. Under side as in male.

Expanse 2 inches.

*Hab.* Upper Kasai district, Congo Free State (*P. Landbeck*).

Type, Mus. Druce.

Mr. G. L. Bates sent a good series of this remarkable insect from Ja river, Cameroons, some males showing faint traces of the white central band described in the female.

Dr. Godman's collection, now in the British Museum, contains a single female from W. Africa, but the precise locality is not stated. It has been there for many years.

#### BATELUSIA, gen. n.

Allied to *Powellana* Beth.-Baker, from which it differs by veins 10 and 11 in the fore wing arising directly from the cell, not stalked from a short stalk as in that genus.

Type, *Batelusia zebra*, sp. n.

\* *Epitola goodii* Holland, 'Psyche,' v. p. 424 (1890).

† *Epitola gerina* Hew. Ill. Exot. Butt., Lyc. suppl. p. 19, pl. 1 b. figs. 13, 14 (1878).

*BATELUSIA ZEBRA*, sp. n. (Plate XXXIV. fig. 6, ♀.)

*Female.* Upper side: both wings creamy white with the dark lines of the under side showing through. Fore wing with the apex and outer margin rather broadly and evenly blackish brown. Cilia of fore wing fuscous, of hind wing pale brown. Under side creamy white shaded with pale brown, with a series of six dark brown lines of varying intensity common to both wings. A faint submarginal line also common to both wings. Cilia pale brown. Palpi and legs black. Abdomen creamy white.

Expanse  $1\frac{3}{10}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*).

Type, Mus. Druce.

This curious little insect, which is very Pierine in appearance, is quite unlike anything known to me.

The type is unique.

*LACHNOCNEMA NIVEUS*, sp. n. (Plate XXXIV. fig. 4, ♀.)

*Female.* Upper side: both wings pure white with the costa, apex, and outer margin dark brown; inner margin rather narrowly dark brown, especially in hind wing. Basal areas of both wings slightly suffused with grey. Cilia of both wings fuscous, whitish above apex of hind wing. Under side: fore wing pure white, costa narrowly and evenly, apex and outer margin rather broadly and unevenly grey shaded with reddish brown. Along the costal and outer margin from the base to the anal angle is a row of minute black dots and crescents heavily bordered with silver. Beyond the cell about half-way to the margin are two confluent, oval, dark brown spots, placed one above the other, containing silver ocelli. The hind wing is marked much as in *L. bibulus* Fab.\* ♀, but the discal area is more distinctly white and the central band is more broken and comparatively smaller. Thorax and abdomen and legs, which are densely hairy, cream colour. Palpi cream, shading to dark brown at tips.

Expanse  $1\frac{9}{10}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*).

Type, Mus. Druce.

Described from two specimens which do not differ.

Perhaps nearest to *L. busoga* Beth.-Baker †, from Busoga, a specimen of which is in the British Museum, but quite distinct. It will be noticed that there are no dark spots closing the cells in this insect.

*LACHNOCNEMA LUNA*, sp. n. (Plate XXXIV. fig. 5, ♀.)

*Female.* Upper side: fore wing rich dark brown with an

\* *Hesperia bibulus* Fab. Ent. Syst. iii. 1, p. 307 (1793).

† *Lachnocnema busoga* Beth.-Baker, Ann. Mag. Nat. Hist. ser. 7, vol. xvii. p. 105 (1906).

ochreous discal band crossed by the brown nervules, commencing beyond the cell below vein 6 and extending to vein 1, above which it reaches almost to the base. Cilia distinctly chequered dark brown and cream. Hind wing ochreous, costal half and outer and inner margins rather narrowly dark brown; the veins crossing the ochreous area are not brown as in fore wing. Cilia cream, faintly brown at the termination of the nervules. Under side: fore wing much as in the preceding *L. niveus*, but the discal area yellow suffused with grey scales from the base and between the nervules, a double brown marking closing the cell. Hind wing much as in *L. niveus*, but the discal area cream and all the spots darker brown. Legs and palpi dark fuscous. Abdomen brown above, dark fuscous below.

Expanse  $1\frac{7}{10}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*).

Type, Mus. Druce.

Seems to be allied to *L. reutlingeri* Holland\*, by the colour of the upper surface.

#### LACHNOCNEMA MAGNA.

*Lachnocnema magna* Auriv. Ent. Tidskr. xvi. p. 209 (1895).

*Arrugia umbra* Grose Smith, Rhop. Exot. iii. Afr. Lyc. p. 128, pl. 27. figs. 5, 6 (1901).

*Female.* Differs from the male only by being slightly paler on both surfaces and by the outer margin of the fore wing being considerably more convex.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., wet and dry seasons (*G. L. Bates*); upper Kasai district, Congo Free State (*P. Landbeck*).

Mr. Bates obtained a large series of this insect in the Cameroons which scarcely vary.

#### RAPALA ANGELITA.

*Deudorix angelita* Suffert, Iris, xvii. p. 54 (1904).

*Deudorix schultzei* Auriv. Arkiv Zool. iii. no. 19, p. 2, figs. 37, 38 (1907).

*Deudorix makala* Bethune-Baker, P. Z. S. 1908. p. 111, pl. ix. fig. 4.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., wet and dry seasons (*G. L. Bates*).

An excellent photograph of Suffert's type (a female) in the Berlin Museum shows that the above synonymy is correct.

#### DIOPETES KEDASSA, sp. n. (Plate XXXIV. fig. 13, ♂.)

*Male.* Closely allied to *D. catalla* Karsch †. Upper side less brilliant in hue, and with the apical and outer marginal

\* *Lachnocnema reutlingeri* Holland, Ann. Mag. Nat. Hist. ser. 6, vol. x. p. 286 (1892).

† *Diopetes catalla* Karsch, Ent. Nachr. xxi. p. 318 (1895).

areas of the fore wing more broadly black. On the hind wing all the veins are distinctly black, which is not the case in *D. catalla*. On the under side the markings are much as in *D. catalla*, but much less prominent.

*Female*. On the upper side differs from *D. catalla* ♂ by the entire absence of the purple sheen on the basal and discal areas of both wings. Under side as male but paler.

Expanse, ♂  $1\frac{1}{10}$  inch, ♀  $1\frac{1}{8}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*).

Types, Mus. Druce.

This is a smaller insect than *D. catalla*, a long series of which together with *D. aucta* Karsch\* were obtained by Mr. Bates at Bitje. Good photographs of Karsch's types in the Berlin Museum have enabled me to identify these species with certainty.

DIOPETES PASTEON, sp. n. (Plate XXXIV. fig. 14, ♂.)

*Male*. Upper side dull purple, brilliant only when held at an angle; apical third of fore wing and veins of hind wing black. Under side pale olivaceous brown marked with white shades, but without lines. Fore wing: some white scales in and at the end of the cell; the outer margin is broadly shaded with white and the inner margin is broadly white. Hind wing: discal and inner marginal area thickly shaded with white; a white spot on the glandular patch and some whitish shades on the outer margin. A small black spot near the apex and another, marginal, surrounded with orange in cell 3. An orange spot with a black dot at the extreme apex. Thorax and abdomen purple above, paler below. Legs brown, white-spotted. Palpi brown with white hairs. Antennæ brown, spotted with white.

Expanse  $1\frac{1}{8}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*).

Type, Mus. Druce.

The absence of all lines on the under side at once distinguishes this insect from its allies.

PSEUDALETIS BATESI, sp. n. (Plate XXXV. fig. 6, ♀.)

*Female*. Upper side: fore wing white with the apex and outer margin broadly blackish brown; costal margin narrowly pale brown. A brown spot in the middle of the cell and another, like it, closing the cell. The basal, cellular, and outer edge of the white discal areas are dusted with yellow scales. Hind wing pure white with the apex and outer margin blackish brown. From the anal angle to vein 2 is an anteciliary black line inwardly dusted with greyish-blue metallic

\* *Diopetes aucta*. Karsch, Ent. Nachr. xxi. p. 318 (1895).

scales. Cilia of both wings brown. Under side: fore wing white; apical area crossed by three indistinct pale brown bands originating on the costal margin and converging to the angle where they become linear. The cell from its base is wholly pale brown excepting towards the end, where it is crossed by a white bar. Outer margin and cilia pale brown. Hind wing white, apical half crossed by four indistinct brown lines which converge near the margin on vein 2 and are thence angled to the anal margin. Anal angle yellow, supporting two black spots on the margin, one on either side of vein 1, also a few metallic greyish scales. Thorax and abdomen brown above, yellow below. Legs and front of head yellow. Anal tuft blackish brown. Tails brown.

Expanse 2 inches.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*).

Type, Mus. Druce.

Nearest to *P. antimachus* Staud.\*

EPAMERA NEAVEI, sp. n. (Plate XXXV. fig. 4, ♂.)

*Male.* Upper side rich cerulean blue, colour of *E. laon* Hew. Fore wing with apical half deep black. Hind wing with apex very narrowly and evenly black; large shining patch dark grey. Lobe black, crowned with orange and dusted with rich blue scales. Cilia of fore wing fuscous, of hind wing pure white. Tail on vein 1, which is much longer than usual in this genus, pure white; tail on vein 2 black, tipped with white. Under side pure white. Fore wing with apex and outer margin rather narrowly shaded with brown; a faint submarginal brown line followed by a clearly defined brown line; the inner margin is broadly shining white and has attached to its edge a large tuft of long blackish hairs. Cilia white, tipped with black. Hind wing with a black anteciliary line followed by two brown lines as described in the fore wing, the innermost angled above the lobe to the inner margin. Near the margin between veins 2 and 3 is a large black spot surrounded by orange, which orange is continued in a very irregular line to the inner margin. Lobe black, inwardly bordered with red on which are dusted violet scales. Cilia pure white. Thorax and abdomen rich blue above; white below. Legs white; the tarsi spotted with black. Antennæ black and white spotted; palpi white with black tips. Head bright orange.

Expanse  $1\frac{1}{2}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft. (*G. L. Bates*).

Type, Mus. Druce.

This beautiful insect is not nearly allied to any with which I am acquainted, but by the shape of the wings and by the possession of the long tail on vein 1 of the hind wing it seems

\* *Pseudaletis antimachus* Staud. Exot. Schm. i. p. 276, pl. 95 (1888).

to be near *Tanuetheira timon* Fab. \*, but unlike that species has only four branches to the subcostal nervure in the fore wing.

I have named it after Mr. S. A. Neave, whose researches in the Congo regions have already revealed so many new forms of insects.

*EPAMERA SIBELLA*, sp. n. (Plate XXXV. fig. 2, ♂.)

*Male*. Closely allied to *E. bellina* Plötz, from which it differs by the upper side being violaceous blue without the greenish reflections, by the large shining patch on the hind wing being paler, and by the almost total absence of the black at the anal angle of the hind wing. On the under side the orange areas near the anal angle are much less extensive and do not reach the black line above the lobe. The front of the head is bright orange.

Expanse  $1\frac{1}{2}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*).

Type, Mus. Druce.

I have compared this insect with the type of *E. iaspis* †, which according to Prof. Aurivillius equals *E. bellina* Plötz ‡. The orange head distinguishes it at once. In that respect it is like *E. iasis* Hew. §

*EPAMERA GEMMARIUS*, sp. n. (Plate XXXV. fig. 3, ♂.)

*Male*. Closely allied to *E. sappirus* mihi ||. Differs in the shade of blue which closely approaches that of *E. laon* Hew., in the much less concave inner margin of the fore wing, and by the reduced area of the shining patch on the hind wing. On the under side the ground-colour is whiter, but the markings, though paler throughout, are the same as in *E. sappirus*. The front of the head is white.

Expanse  $1\frac{1}{2}$  inch.

*Hab.* Bitje, Ja river, Cameroons, 2000 ft., dry season (*G. L. Bates*).

Type, Mus. Druce.

This may prove to be a varietal form of *E. sappirus*, but the totally different colour and different shaped inner margin to the fore wing seem to point to another insect.

*SPINDASIS LEONINA BITJE*, subsp. n.

*Zeritis leonina* E. M. Sharpe, Ann. Mag. Nat. Hist. ser. 6, vi. p. 104 (1890); id. Trans. Ent. Soc. 1890, pl. xviii. fig. 5.

*Male*. Differs from the typical form by the orange on the fore wing spreading along the inner margin almost to the angle

\* *Papilio timon* Fab. Mant. Ins. ii. p. 65 (1787).

† *Iolaus iaspis* H. H. Druce, Ann. & Mag. Nat. Hist. ser. 6, vol. v. p. 30 (1890).

‡ *Iolaus bellina* Plötz, S. E. Z. xli. p. 200 (1880).

§ *Iolaus iasis* Hew. Ill. Diur. Lep., Lyc. p. 42, pl. xix. figs. 11, 12 (1865).

|| *Epamera sappirus* H. H. Druce, P. Z. S. 1902, p. 117, pl. xii. fig. 1.